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Do Social Relationships Protect Victimized Children Against Internalizing Problems?

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Abstract

We investigated whether social relationships protect children against the effects of victimization on internalizing problems. We used data from the Zurich Project on the Social Development of Children and Youths. Victimization at age 8 was associated with internalizing problems at age 9. Victims who had siblings, warm parents, and a good relationship with the teacher had less severe internalizing problems than those who did not, providing evidence for a protective effect of social relationships. Friendships with classmates were not found to be protective. Furthermore, social relationships did not protect victims more than non-victims.

KEYWORDS peer victimization, internalizing, anxiety, depression, protective factors, social relationships, social support, belonging

Do Social Relationships Protect Victimized Children Against Internalizing Problems?

Research has shown that victims of peer aggression have more psychosocial problems than nonvictims as they experience more internalizing problems, more loneliness, and lower self-esteem than their nonvictimized counterparts (Hawker & Boulton, 2000). However, whether or not these problems are actually *caused* by peer victimization remains unclear. In fact, the relation is reciprocal—internalizing problems not only result from but also lead to victimization, because they are associated with poor social skills and deficits that elicit peer aggression (e.g., Fekkes, Pijpers, Fredriks, Vogels, & Verloove-Vanhorick, 2006; Kochel, Ladd, & Rudolph, 2012; Nishina, Juvonen, & Witkow, 2005; but see Bond, Carlin, Thomas, Rubin, & Patton, 2001 who did not find such relations).

Although methodologically, experiments would be the best way to establish whether victimization leads to internalizing problems, they cannot be conducted. But, there are techniques with which to approach the question of causality, namely by (a) making sure that the victimization preceded the internalizing problems and (b) taking into account the possibility that the relation is due to a third factor. The first issue can be handled through a longitudinal design in which children are followed over time. The second issue can be handled by controlling for factors that influence both victimization and internalizing problems. Although causality is still difficult to assess, because researchers can never be sure that they included all relevant third factors, these strategies at least bring them closer to assessing whether victimization leads to internalizing problems.

Recently, Ttofi, Farrington, Lösel, and Loeber (2011) collected studies that used these two strategies. The evidence from these studies was somewhat mixed, with some finding evidence for a relation (e.g., Bond et al., 2001; Bowes, Maughan, Caspi, Moffitt, & Arseneault,

2010; Fekkes et al., 2006), and others not (Kochel et al., 2012; Lösel & Bender, 2011; McGee et al., 2011). Ttofi et al. (2011) combined the studies and computed an average effect size. They found that the odds of experiencing later internalizing problems for victims were 1.74 times higher than for nonvictims.

However, the majority of victims does not suffer from severe internalizing problems (e.g., Averdijk, Müller, Eisner, & Ribeaud, 2011). This triggers the question of whether there are factors that protect these children against the negative effects of victimization. This issue is not only of theoretical importance. It is also of practical interest, because if it is found that there are factors that reduce the psychological impact of victimization, then it is possible to manipulate these in an effort to protect victims against internalizing problems. To this end, and in line with this special issue, we investigated whether there are factors that protect victims against internalizing problems using longitudinal data from Switzerland. Specifically, we focused on the protective potential of social relationships, because researchers have suggested that the presence and positivity of social relationships may offset the negative consequences of life stress (Baumeister & Leary, 1995).

Before we formulate how social relationships could buffer victims from internalizing problems, we define three key concepts: peer victimization, internalizing problems, and protective factors. There has been discussion over the definition of peer victimization, especially in the context of bullying. According to Olweus (1999), bullying is aggressive behavior, repeated, and characterized by an imbalance of power. In contrast, peer victimization focuses more generally on aggressive acts between children. Evidence suggests that young children primarily contrast aggressive and nonaggressive acts, and not so much aggression and bullying (Smith, Cowie, Olafsson, & Liefooghe, 2002). This study focused on peer victimization and not

on bullying specifically.

Our measure for internalizing problems comprised two subdimensions, namely anxiety and depression. These two subdimensions display significant comorbidity (Kovacs & Devlin, 1998). Prior research has been mixed as to whether victimization is more strongly related to anxiety or depression (e.g., Craig, 1998; Gibb, Horwood, & Fergusson, 2011; Hawker & Boulton, 2000). Since we did not hypothesize that victimization is more strongly linked to one than the other, we used a composite measure.

Finally, based on Farrington and Ttofi (2011), we distinguished two types of protective factors. The first type (risk-based protective factors) refers to factors that predict fewer internalizing problems in the at-risk group (victims). The second type (interactive protective factors) refers to factors that predict fewer internalizing problems in victims than nonvictims. The latter is narrower and implies that protective factors do not necessarily affect adjustment when the stressor (victimization) is absent (Rutter, 1985).

Social Relationships, Victimization, and Internalizing Problems

As the mentioned literature shows, peer victimization can have negative consequences on mental health. One important reason for this is that peer victimization is typically an expression of social exclusion (Kvarme, Helseth, Sæteren, & Natvig, 2010; Thornberg, Halldin, Bolmsjö, & Petersson, 2011), which interferes with humans' fundamental need to belong to social groups (Baumeister & Leary, 1995). However, if victims have access to (other) positive social relationships, these may protect them against the negative effects of victimization. There are several ways in which this works. To start, social relationships provide emotional and practical support that can be useful in coping with victimization, for example by offering advice, bolstering self-esteem, and sustaining a feeling of competence (Thoits, 1995). There is abundant

evidence that perceived social support buffers individuals from the negative consequences of life stress, such as illness, injury, violence, and other types of trauma (Cohen & Wills, 1985; Kessler, Price, & Wortman, 1985; Thoits, 1995). In the context of peer victimization, evidence for a buffering effect of social support is somewhat mixed. Among middle school students, Davidson and Demaray (2007) found that perceived parent support buffered female victims from internalizing problems, while for males this was the case for perceived teacher, classmate, and school support. For nonvictims, the level of perceived support did not matter, but for frequent victims low support was associated with higher internalizing problems compared to high support, suggesting an interactive protective effect. Three other studies, however, did not find the same. Kochenderfer-Ladd and Skinner (2002) did not find that social support seeking moderated the contemporaneous relation between victimization and anxiety and depression. Rothon, Head, Klineberg, and Stansfeld (2011) did not find that social support from family or friends moderated the relation between victimization and depression two years later. In two cross-sectional studies, Rigby and Slee (1999; Rigby, 2000) found no evidence that perceived help moderated the relationship of peer victimization with suicidal ideation and general wellbeing. Still another study provided partly confirming, partly disconfirming evidence. Holt and Espelage (2007) found that victims and bully-victims with moderate levels of social support were least anxious/depressed, but those with low *and* high social support were most anxious/depressed.

Another perspective on the role of social relationships stresses that their protective effect extends beyond the social support they provide. Instead, the mere presence of positive social relationships protects individuals from the effects of life stress. The way in which this works is that positive social relationships provide individuals with the feeling that they belong to a social group, which is needed for happiness (Baumeister & Leary, 1995). The need to belong is

evolutionary based (strong social bonds promote survival and reproduction and being in a cooperative group facilitates the protection and acquisition of limited resources). If children are excluded by their peers, then the feeling that they belong to social groups in other areas of life is crucial for their well-being. In fact, the belongingness hypothesis proposes that relationships are substitutable, which is indicated by "a capacity for social relatedness in one sphere to overcome potential ill effects of social deprivation in another sphere (e.g., if strong family ties compensate for aloneness at work)" (Baumeister & Leary, 1995, p. 500). If this is indeed the case, it should should expect that if victims have alternative social relationships, the negative effects of victimization are reduced. In order to be protective, social relationships should satisfy certain conditions (Baumeister & Leary, 1995); that is, they should be marked by frequent interactions, positive caring, and be part of an enduring bond. There are several social relationships that potentially satisfy these criteria.

First, most children have frequent interactions with their parents and the parent-child relationship is typically an enduring bond. To some extent, children in single-parent households have less access to frequent interactions, because one parent is absent during large parts of the time. We, therefore, expected that two-parent households would be more likely to buffer victims from internalizing problems than single-parent households. Furthermore, because relationships should be positive in order to be protective, we expected that especially caring parents relieve the internalizing problems in victims.

Second, having relationships with peers, including siblings and friends, may buffer the effects of victimization on internalizing problems. Relationships with siblings are typically marked by frequent interactions and part of an enduring bond. We, therefore, expected that victims with siblings would be better protected against internalizing problems than victims

without siblings. In addition, we expected that stable friendships protect against the negative effects of peer victimization. Furthermore, we expected that especially positive relationships with siblings and friends protect victims from internalizing problems.

Third, other adult confidants (teachers, family members, sports leaders) with whom the child has frequent contact could provide a satisfying social relationship. Due to data limitations, we focused on the role of teachers only. We expected that positive relationships with teachers protect victims against internalizing problems.

In sum, we expected that these social relationships protect victims against internalizing problems. We hypothesized social relationships to act as *risk-based protective factors*. Since we expected that these factors also protect nonvictims against internalizing problems, we did not hypothesize that they would act as *interactive protective factors*.

In spite of our hypotheses, there are two important factors that may hinder the protective potential of social relationships. First, victims typically have less positive relationships than non-victims, including friendships and positive relationships with teachers (Hodges, Boivin, Vitaro, & Bukowski, 1999; Newman, Holden, & Delville, 2005; Rigby, 2000). Hence, although positive social relationships may in principle protect against internalizing problems, their effect may be relevant to only a small group of victims who have access to such relationships. Second, the extent to which the effects of peer victimization on internalizing problems can really be prevented depends on the importance of peer relationships. If acceptance by the peer group is vital for children's well-being, then caring parents may not matter much. Indeed, research suggests that acceptance by the peer group is more important for self-esteem than acceptance by family and close friends, perhaps because acceptance by peers is less certain (Leary & Baumeister, 2000). This may be an important reason why social relationships may *not* protect

victims of peer aggression against internalizing problems.

There is some prior research on the protective potential of social relationships in the context of peer victimization and internalizing problems. Based on interview data, Thornberg et al. (2011) wrote that some victims who overcame their experiences "reported that they had the strength to do so thanks to supportive social relationships or influences (e.g., from their parents or friends)." In a cross-sectional survey, Newman et al. (2005) found that victims who perceived isolation reported more internalizing symptoms than others. The same was not the case for nonvictims, suggesting a potential interactive protective effect of social relationships. Finally, Hodges et al. (1999) assessed the extent to which the sheer existence of a mutual best friend acted as an interactive protective factor, and found that it completely eliminated the effect of victimization on increases in internalizing problems one year later. However, when investigating friendship quality, they found that high levels of companionship *increased* internalizing problems.

Although these studies provide interesting findings, they have some limitations. Only one utilized longitudinal data (Hodges et al., 1999), and this study only assessed whether social relationships affect the relation between T1 victimization and *increases* in internalizing problems between T1 and T2 (i.e., instead of controlling for internalizing problems measured before victimization, they controlled for internalizing measured at the same time as victimization). This is a somewhat limited test because victimization and T1 internalizing problems are likely already associated.

We sought to add to the literature in two ways. First, we used longitudinal data, where most prior work used cross-sectional data. In assessing the relation between victimization and internalizing problems, we controlled for internalizing problems that existed before victimization

occurred. Second, instead of focusing on social support (like most prior work) we focused on the role of (a) the presence and (b) the positivity of social relationships. In particular, we expected that not the mere presence, but rather the positivity of social relationships protected victims against internalizing problems. According to the belongingness hypothesis it is these factors that are important, and not so much social support. However, our data also had limitations. In particular, we did not measure the positivity of relationships as viewed by the children themselves, but as viewed by others.

Method

Data were drawn from the Zurich Project on the Social Development of Children and Youths. The target population consisted of all 2,520 children who entered the first grade in Zurich, Switzerland in 2004. Because two interventions occurred at the school level, a cluster randomized sampling approach was used. From all 90 public primary schools, a sample of 56 was drawn. The final sample consisted of all 1,675 children who enrolled in these schools (Eisner & Ribeaud, 2005).

The children's average age at their first interview was 7.5 years (SD = 0.4; 52% boys). Eleven percent of the children were born abroad, and 46% had two foreign-born parents. At T1, the response rate was 81% for the children (n = 1,361) and 74% for the parents (n = 1,240). At T2 (age 8), the retention rate was 95% for the parents and 97% for the children. At T3 (age 9), the retention rate was 95% for the parents and 96% for the children.

Written informed consent was obtained from the parents. Computer-assisted parent interviews were conducted at the respondent's home. Computer-assisted child interviews were conducted at school.

Measures

***Internalizing behavior*.** The Social Behavior Questionnaire (SBQ; Tremblay et al., 1991) measured child anxiety and depression from the children, parents, and teachers at T3. There exists wide support for multi-informant assessment given the unique perspective of each informant (Achenbach, McConaughy, & Howell, 1987; Kerr, Lunkenheimer, & Olson, 2007). However, for each specific research question, the choice for (an) informant(s) requires consideration of the relevant context and response bias. We sought to avoid arbitrarily including one or all informants (Kraemer et al., 2003) and based our choice on prior research. For internalizing behavior, children are increasingly regarded as important informants (Grills & Ollendick, 2002; Varni, Limbers, & Burwinkle, 2007) and, along with parents, they are perceived as more useful informants than teachers (Hinshaw, Han, Erhardt, & Huber, 1992; Kamphaus, Huberty, DiStefano, & Petoskey, 1997; Loeber, Green, & Lahey, 1990). We, therefore, used the children and parents as informants. As in other studies (Achenbach et al., 1987; Grills & Ollendick, 2002), the correlation between parents and children was low ($r = .09$, $p < .01$). However, the absence of high correlations, in fact, facilitates valid measurement because informants provide unique information (Kraemer et al., 2003). Using parents' and children's accounts provided us with both an inner and outer view and allowed us to reduce shared method variance.

Responses from the parents were recorded on a five-point Likert scale. The children were shown drawings of a child's specific acts and asked whether they sometimes do what is shown (*yes*/*no*). Assessments were similar to the Dominique Interactif (e.g., Linares Scott, Short, Singer, Russ, & Minnes, 2006). The items were the same across informants (e.g., "The child cries a lot"). Cronbach's α was .75 for the parents (nine items; range .00–2.56, $M = 0.85$, $SD = 0.49$) and 0.71 for the children (nine items; range .00–1.00, $M = 0.38$, $SD = 0.24$).

Peer victimization. The scale was derived from Olweus (1993) and included in the T2 child interview. It covered teasing, stealing and destroying possessions, physical violence, and rejection (α = .65). Questions were supported by pictures (Perren & Alsaker, 2006). Answer categories indicated whether victimization had occurred *never*, *once or twice*, *more than twice*, at *least once per week*, or *(almost) every day* since the start of the school year (on average about three months earlier). Our variable returned the sum across the four items (range 0–16, M = 3.34, SD = 2.98). In a multivariate regression, child attrition between T2 and T3 was not related to prior internalizing or victimization (p > .05).

Two-parent household. This variable (M = 0.73; SD = 0.45) was recorded as 1 if the child lived with both parents at T1 and 0 if not.

Presence of siblings. This variable (M = 0.78; SD = 0.41) was recorded as 1 if there were other children in the household at T1 and 0 if not.

Number of friendships. This variable was computed using a sociometric instrument at T2 (e.g., Alsaker & Nägele, 2008). Children nominated up to six classmates for a hypothetical school trip. The number of reciprocated friendships was calculated and weighted by the number of raters and study participants (M = 1.60; SD = 1.18; range 0–6). Scores were computed only for classes with at least 10 pupils of whom at least five were study participants.

Warm parenting. This was measured in the T2 parent interview (Alabama Parenting Questionnaire; Shelton, Frick, & Wootton, 1996) and assessed parental involvement and positive parenting (e.g., “You compliment your child when he/she does something well”). Answers on a five-point scale ranged from *never* to *always* (15 items; α = .75; M = 3.12; SD = 0.39; range 1.67–4).

Positive relationship with siblings. This was measured through the parents at T2

("[child] and [sibling] play with each other" and "[child] and [sibling] get along with each other"; up to six siblings). Answers on a five-point scale ranged from *never* to *very often*. The mean was computed (M = 2.99; SD = 0.69; range 0–4).

Positive relationship with friends. This variable was approximated by measuring the prosocial behavior of reciprocal friends by the multi-informant SBQ (parent, teacher, and child; e.g., "comforting sad or crying child"). We computed the average score across all friends (M = 0.04; SD = 0.46; range -1.58–1.50).

Teacher-child relationship. This variable was measured at T2 through the parents ("How well does [child] get along with his/her teacher?" and "The teacher cares about [child] as much as possible"). Answers on a 10-point scale ranged from *not so well/fully untrue* to *extremely well/fully true*. The scores were averaged (M = 7.11; SD = 1.70; range 0–9).

Covariates. Based on a literature review in which we identified risk factors that predicted both victimization and internalizing problems, we included *gender* (e.g., Cassidy, 2009), *socioeconomic status* (e.g., McClure, Brennan, Hammen, & Le Brocque, 2001), *migrant ethnicity status* (e.g., Spriggs, Iannotti, Nansel, & Haynie, 2007), *parental conflict* (e.g., Rhoades, 2008), and *aggression* (e.g., Schwartz et al., 1998). *Sensation-seeking* was included as an aspect of self-control deficits (e.g., Jensen-Campbell, Knack, Waldrip, & Ramirez, 2009). All covariates were measured at T1, since controls measured at the same time as victimization (T2) may mediate its relation with internalizing problems (Murray, Farrington, & Eisner, 2009). Due to space limitations, we refer to Ribeaud and Eisner (2010) for a description of the covariates.

Analytic Strategy

We assessed (a) the effect of victimization on internalizing problems, (b) the effect of social relationships on internalizing problems among victims, and (c) the interactive effect of

victimization and social relationships on internalizing problems.

For analysis (a) we included the covariates mentioned above to reduce the possibility that the relation was due to third factors. Besides these covariates, longitudinal studies often control for *prior internalizing problems*. This was done to minimize the possibility that victimization merely predicted later internalizing problems because it reflected past internalizing problems (and, as noted, victimization is indeed affected by prior internalizing problems). This practice, however, is somewhat problematic in those cases where victimization is not so much a life event, but rather a symptom of a more stable victimization proneness. In these cases, T2 victimization is indicative of a general victimization "trait" that affects internalizing problems at all time-points, including T1. Thus, controlling for T1 internalizing problems would underestimate the relation between victimization and T3 internalizing problems because T1 internalizing problems partially mediate the effect of victimization on later internalizing problems. We were unable to assess the extent of stability in victimization from T1 through T2, because we had no measures of self-reported victimization at T1. We did have a measure at age 11, which correlated with T2 victimization at $r = .18$ ($p < .01$). Although this shows a significant amount of stability, it also indicates a substantial amount of change. Thus, there was some justification for including a variable for prior internalizing problems, which we did. Nevertheless, victimization is also in part characterized by stability, which is why our estimate is to some extent conservative and we also provide results that do not control for prior internalizing problems.

Our approach was different for analyses (2) and (3). We suspected that the social relationships were characterized more by stability than change. Due to data limitations, we could test our suspicion only to some extent. While there was a high amount of stability for family characteristics (e.g., only about 3% of the parents divorced between T1 and T2, and the

correlation between warm parenting at T1 and T2 was .65, $p < .01$), a significant amount of stability has also been found in friendships (Berndt & Hoyle, 1985). In our data, we found that about half of the friendships at T2 already existed at T1 and the correlation between the number of friendships at T1 and T2 was .46 ($p < .01$). The teacher relationship is also likely to be relatively stable, since in Zurich, children remain with the same teacher across the first three school years. We, therefore, did not control for prior internalizing problems in these analyses. We did include the other covariates because most were related to the social relationships measures.

We used OLS regression. Given that levels of victimization may differ between classes and to correct for heteroskedasticity, robust standard errors were estimated. We conducted a series of sensitivity analyses, including checks for nonlinearity and multicollinearity, but no problems were detected. We used the standardized residual, leverage, and Cook's distance to identify outliers. Effects were observed in one analysis, which we report on below.

Results

Bivariately, peer victimization was related to child- ($b = .013$, $p < .01$) and parent-reported ($b = .015$, $p < .01$) internalizing problems. After including all covariates except prior internalizing problems, the relations remained (child-reported: $b = .013$, $p < .01$; parent-reported: $b = .016$, $p < .01$). After including prior internalizing problems, the relation remained for child-reported ($b = .009$, $p < .01$) but not for parent-reported ($b = .007$, $p > .05$) internalizing problems. Given the range of the dependent variables, effect sizes were not large.

As a more intuitive effect size, we computed dichotomous variables with a 1 for children who scored more than 1 *SD* above the mean of internalizing problems and a 0 for others (cut-offs at the 80th and 87th percentile). As an intuitive categorization of victimization, we used the

maximum frequency of victimization across the different types of victimization. Adjusted proportions from logistic regressions showed that the proportion of high-rate children increased as victimization frequency increased, but only for child-reported internalizing problems (Table 1). The proportion of children with high levels of internalizing problems was substantially higher among those who were victimized (almost) every day (0.253) than among nonvictims (0.086). However, even among frequent victims, the large majority was not in the high-rate range.

We assessed to what extent social relationships were different for different levels of victimization (Table 2). Higher levels of victimization were associated with single-parent households, the absence of siblings, and fewer reciprocated friendships compared to lower levels of victimization. The positivity of relationships did not differ between different levels of victimization.

Next, we considered social relationships as *risk-based protective factors* and investigated whether they protected victims against internalizing problems. To exclude occasional incidents, we only included those who experienced at least one type of victimization more than twice (n = 721). There were no effects on child-assessed internalizing problems. The effect of prosocial friends was not significant ($p < .10$). According to the parent's reports, the presence of siblings, warm parents, and a good relationship with the teacher protected victims against internalizing problems.

One result was found to be sensitive to the presence of outliers: having siblings was significantly related to child-reported internalizing problems after excluding seven outliers (b = -.053, $p < .05$). Because inspection of these outliers revealed no substantive reason to exclude them, we concluded that these were legitimate data points and provide the results without the outliers separately. These children were often victimized and had high levels of internalizing

problems, suggesting that for these children, the effects of victimization were too strong for siblings to have a protective effect.

Finally, we tested whether social relationships worked as *interactive protective factors*. We constructed interaction terms between victimization and each social relationship and entered each into a separate model, along with the two main effects and the covariates. Results showed no significant effects (Table 4).

Discussion

Prior research has shown that peer victimization is related to increased internalizing problems but that the majority of victims do not become anxious or depressed. Against this background, we assessed which factors might protect these children from the negative effects of victimization. Particularly, we investigated the protective potential of alternative positive relationships. Overall, we found some support for a protective effect.

Our first main finding was that, consistent with our prior work on the longer-term effects of peer victimization (Averdijk et al., 2011), peer victimization at age 8 predicted internalizing problems at age 9 even when prior internalizing problems were controlled. Effects were only observed for the child reports. For parent-reported internalizing problems, victimization was related to internalizing problems, but not once prior internalizing problems were included. A potential explanation for this is that the negative effects of victimization at school may not generalize to the home setting.

Our second main finding was that some social relationships protected victims against internalizing problems. First, warm parenting protected victims against internalizing problems. Parents' mere presence did not, supporting the idea that not the mere presence, but rather *positive* social relationships works as a protective factor. We note, however, that our measure for the

mere presence of parents (two-parent household) was limited as children from single parent-families may still have frequent interactions with the absent parent.

Further support for the protective potential of positive social relationships was found for the relationship with the teacher: Victims who had a positive relationship with their teacher had less severe internalizing problems one year later than other victims.

Thus, our findings so far supported the view that positive relationships, but not the mere presence of social relationships, protected victims against internalizing problems. This was different for peer relationships (friends and siblings). For siblings, their mere presence, and not a positive relationship, was protective. However, the absence of an effect for the positivity of the sibling relationship may be partly explained through the low number of children who had poor relationships with their siblings. We did not find any protective effects for friendship. Prior research gives us some clues as to why we found no effects. Importantly, research has shown that peer aggression may happen between friends (Mishna, 2004). If this is the case, then it is very likely that friendships do not protect victims against internalizing problems.

In sum, we found support for the hypothesis that some social relationships can alleviate the negative effects of peer victimization. This implies that the negative effects of peer victimization can to some extent be reduced. Of course, this is only the case if (positive) social relationships are available to victims. We indeed found that victims were as likely as nonvictims to have positive relationships; however, they were less likely to have siblings.

Having said all this, we only found effects for parent-reported internalizing problems. No effects were found for the child reports. It is difficult to say why this was the case. In the absence of a golden standard to measure internalizing problems, both parents and children are considered valid informants. We, therefore, lean towards interpreting the findings as complementary, with

each informant capturing a unique aspect of the internalizing problems. Alternatively, it is possible that the effects of social relationships only appear in those contexts where the stressor (peer victimization) is absent, namely at home, where the parents observed the internalizing problems. Perhaps the effects of peer victimization at school are too detrimental to be counteracted, something that may be supported by the finding that child-reported but not parent-reported internalizing problems were related to peer victimization after controlling for prior internalizing problems. A third explanation could be that our findings are partly driven by shared method variance; that is, the information on most social relationships came from the parents, for whom we also found the effects.

Our third main finding was that there was no evidence for interactive protective factors. This was in line with our expectation, because we expected that social relationships protect victims and non-victims alike. This does not support the claim that interactive protective effects exist (Farrington & Ttofi, 2011; Rutter, 1985). However, our conclusions are limited to the specific protective factors investigated and to our sample, so further theory and research on interactive protective factors should provide more insight into this issue.

Limitations

The main limitation of our study pertains to the measures that we used to test the hypotheses. First, we did not have measures on the positivity of relationships as viewed by the children themselves; rather this was measured by others, such as parents. Second, our measure for the presence of both parents was limited to an indicator for two-parent household. Third, and as mentioned, we only investigated a limited number of protective factors that were available in our data. Future research using more a more extensive and precise set of measures is welcomed.

Conclusion

In closing, our findings suggest two things for practice. First, social relationships could be mobilized to reduce the consequences of victimization on mental health, as is already done in some existing prevention programs (e.g., Kaukiainen & Salmivalli, 2009). For example, programs to promote involved and positive parenting for victims' parents may help increase well-being. The same can be said for promoting the teachers' positive involvement with victims. Second, however, since not all social relationships are manipulable (i.e., one cannot advise parents to have more children), the prevention of victimization itself remains the primary prevention strategy to secure emotional well-being.

Statement on Competing Interests

None declared.

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Table 1

Adjusted Proportions (Se) of High-Rate Internalizing Problems (Scores of at Least 1 SD Above the Mean) for Different Frequencies of Victimization

Victimization	Child-reported internalizing problems	Parent-reported internalizing problems
Never (*n* = 278)	.086 (.236)	.088 (.240)
Maximum once or twice (*n* = 329)	.137 (.174)	.067 (.235)
A couple of times (at least twice) (*n* = 399)	.203 (.145)	.093 (.194)
At least once per week (*n* = 195)	.194 (.198)	.101 (.252)
(Almost) every day (*n* = 127)	.253 (.235)	.116 (.304)

Note. Proportions are adjusted for all covariates, including prior internalizing problems.

Table 2

Bivariate Correlations (Two-tailed) of Social Relationships with Peer Victimization (Pearson's r).

	Peer victimization
Presence of relationships	
Two-parent household	-.11**
Having siblings	-.08*
Number of reciprocated friendships	-.14**
Positive relationships	
Warm parents	.03
Positive relationship with siblings	-.05
Prosocial friends	-.03
Good relationship with teacher	-.03

Note. Estimation with robust standard errors.

* $p < 0.05$. ** $p < 0.01$.

Table 3

Multivariate Regressions Predicting Internalizing Problems by Social Relationships for Victims (Unstandardized Beta)

	Child-reported internalizing problems		Parent-reported internalizing problems	
	Model 1	Model 2	Model 1	Model 2
Presence of relationships				
Two-parent household	-.023	—	-.034	—
Having siblings	-.043	—	-.123*	—
Number of friends	-.010	—	-.005	—
Positive relationships				
Warm parents	—	.005	—	-.177*
Positive relationship with siblings	—	.002	—	-.050
Prosocial friends	—	-.049	—	.059
Good relationship with teacher	—	-.007	—	-.046*
n	520	361	503	360

Note. Estimation with robust standard errors. Coefficients adjusted for all covariates except prior internalizing problems. Because for some variables, having positive relations depended on the presence of a relationship (i.e., having a positive relationship with siblings required having siblings and having a positive relationship with friends required having friends), we did not investigate the effect of positive relationships controlling for the presence of relationships.
* $p < 0.05$. ** $p < 0.01$. Two-tailed.

Table 4

Multivariate Regressions Predicting Internalizing Problems by Interactions Between Victimization and Social Relationships (Unstandardized Beta)

	Child-assessed internalizing problems	Parent-assessed internalizing problems
Model 1: Victimization * two parents	-.002	-.006
Model 2: Victimization * siblings	.009	-.016
Model 3: Victimization * number of friends	-.003	.000
Model 4: Victimization*warm parents	.008	-.001
Model 5: Victimization * positive relationship with siblings	.004	-.011
Model 6: Victimization * prosocial friends	-.008	.010
Model 7: Victimization * good relationship with teacher	.000	.001

Note. Estimation with robust standard errors. All models included the main effects of the variables making up the interaction term plus all covariates except prior internalizing problems. * $p < 0.05$. ** $p < 0.01$. Two-tailed.

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